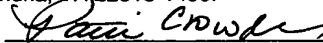


B.1 2827
R.W.

PATENT
Attorney Docket No.: P2D7D1-US

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL" 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail on 25 February 2005 in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Patti Crowder

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of: Khandros et al.

Application No.: 09/295,269

Filing Date: 20 April 1999

For: CONTACT STRUCTURE DEVICE FOR
INTERCONNECTIONS, INTERPOSER,
SEMICONDUCTOR ASSEMBLY AND
PACKAGING USING THE SAME AND
METHOD

Examiner: Norris, Jeremy C.

Group Art Unit: 2827

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on an attached Form PTO/SB/08A is information known to applicant(s). A copy of each listed publication, foreign patent document, and pending U.S. application (including drawings and claims) is being submitted herewith, with exception of U.S. issued patents and U.S. published applications pursuant to 37 C.F.R. §1.98(a)(2)(ii), as well as, a concise explanation of information in a foreign language, if any, pursuant to 37 C.F.R. §1.98(a)(3)(i).

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. The Examiner is requested to initial and return the attached Form PTO/SB/08A in accordance with MPEP §609. This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in §1.56.

- 1 of 3 -

☐ This statement qualifies under *37 C.F.R. §1.97, subsection (b)* because (check all that apply):

- ☐ (1) It is being filed within 3 months of the application filing date (other than the filing date of a continued prosecution application under §1.53(d))
-- OR --
- ☐ (2) It is being filed within 3 months of entry of a national stage
-- OR --
- ☐ (3) It is being filed before the mail date of the first Office Action on the merits
-- OR --
- ☐ (4) It is being filed before the mail date of the first Office Action after the filing of a request for continued examination under §1.114.

☒ *37 C.F.R. §1.97(c)*. If this statement is being filed after the latest of: (1) three months beyond the filing date of a national application; (2) three months beyond the date of entry of the national stage as set forth in §1.491 in an international application; (3) the mailing date of a first Office action on the merits, or (4) the mailing date of a first Office Action after the filing of a request for continued examination under §1.114, but before the mailing date of the earlier of a final office action under §1.113, a notice of allowance under §1.311, or an action that otherwise closes prosecution in the application, then:

☐ a statement as specified in §1.97(e) is provided below; **or**

☒ a fee of \$180.00 as set forth in §1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.

☐ *37 C.F.R. §1.97(d)*. If this statement is being filed after the mailing date of the earlier of a final office action under §1.113, a notice of allowance under §1.311, or an action that otherwise closes prosecution in the application, but before payment of the issue fee, then:

A. a statement as specified in §1.97(e) is provided below; **and**

B. a fee of \$180.00 as set forth in §1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.

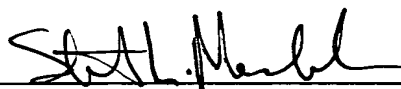
PATENT

Attorney Docket No.: P2D7D1-US

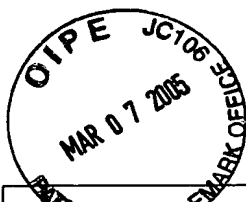
- ☒ *Fee Authorization.* Applicants hereby authorize the Commissioner to charge the above fee of \$180.00 to Deposit Account No. 50-0285 (Order No. P2D7D1-US). Although Applicants believe that no additional fee is due in connection with the filing of this paper, the Commissioner is hereby authorized to charge any additional fees due, or credit any overpayment associated, with this communication to Deposit Account No. 50-0285 (Order No. P2D7D1-US).

Respectfully submitted,

Date: February 25, 2005

By: 
Stuart L. Merkadeau
Registration No. 33,262

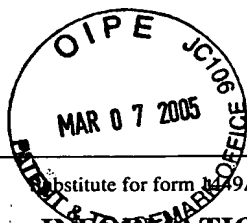
FormFactor, Inc.
Legal Department
7005 Southfront Road
Livermore, CA 94551
Telephone: (925) 290-4028
Fax: (925) 290-4119



Modified Form PTO/SB/08A

Submittal for PTO 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			<i>Complete If Known</i>		
			Application Number	09/295,269	
			Filing Date	20 April 1999	
			First Named Inventor	Khandros et al.	
			Group Art Unit	2827	
			Examiner Name	Norris, Jeremy C.	
Sheet	1	of	4	Attorney Docket No.	P2D7D1-US

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant	Publication Date	Related
		Number	Kind Code ²			
	1		2432275	Bels	9 Dec 47	
	2		3087239	Clagett	30 Apr 63	
	3		3217213	Slater	9 Nov 65	
	4		3274456	Pittler et al.	20 Sep 66	
	5		3336433	Johnson et al.	15 Aug 67	
	6		3373481	Lins	19 Mar 68	
	7		3445770	Harmon	20 May 69	
	8		3460238	Christy et al.	12 Aug 69	
	9		3486083	Takada	23 Dec 69	
	10		3509270	Dube et al.	28 Apr 70	
	11		3519890	Ashby	7 July 70	
	12		3553499	Maguire	5 Jan 71	
	13		3573617	Randolph et al.	6 Apr 71	
	14		3747198	Benson et al.	24 July 73	
	15		3787966	Klossika	29 Jan 74	
	16		3846823	Matthews et al.	5 Nov 74	
	17		3849728	Evans	19 Nov 74	
	18		3982811	Siu et al.	28 Sep 76	
	19		4047780	Cedrone	13 Sep 77	
	20		4125308	Schilling	14 Nov 78	
	21		4332341	Minetti	1 June 82	
	22		4385341	Main	24 May 83	
	23		4532152	Elarde	30 July 85	
	24		4545610	Lakritz et al.	8 Oct 85	
	25		4567432	Buol et al.	28 Jan 86	
	26		4592617	Seider	3 Jun 86	
	27		4618879	Mizukoshi et al.	21 Oct 86	
	28		4667219	Lee et al.	19 May 87	
	29		4673967	Hingorany	16 Jun 87	
	30		4677458	Morris	30 Jun 87	
	31		4728751	Canestate	1 Apr 88	
	32		4747784	Cedrone	31 May 88	
	33		4764722	Coughlin et al.	16 Au 88	
	34		4764848	Simpson	16 Aug 88	
	35		4776804	Johnson	11 Oct 88	
	36		4784872	Moeller et al.	15 Nov 88	



Substitute for form 149A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				<i>Complete If Known</i>	
				Application Number	09/295,269
				Filing Date	20 April 1999
				First Named Inventor	Khandros et al.
				Group Art Unit	2827
				Examiner Name	Norris, Jeremy C.
Sheet	2	of	4	Attorney Docket No.	P2D7D1-US

37	4821148	Kobayashi et al.	11 Apr 89		
38	4871964	Boll et al.	3 Oct 89		
39	4878611	LoVasco et al.	7 Nov 89		
40	4893172	Matsumoto et al.	9 Jan 90		
41	4914814	Behun et al.	10 Apr 90		
42	4955523	Calomagno et al.	11 Sep 90		
43	4985310	Agarwala et al.	15 Jan 91		
44	4998885	Beaman	12 Mar 91		
45	5045975	Cray et al.	3 Sep 91		
46	5055778	Okubo et al.	8 Oct 91		
47	5059143	Grabbe	22 Oct 91		
48	5088190	Malhi et al.	18 Feb 92		
49	5091772	Kohara et al.	25 Feb 92		
50	5110032	Akiyama et al.	5 Mar 92		
51	5148968	Schmidt et al.	22 Sep 92		
52	5154341	Melton et al.	13 Oct 92		
53	5195237	Cray et al.	23 Mar 93		
54	5239126	Oshibe	24 Aug 93		
55	5245751	Locke et al.	21 Sep 93		
56	5294039	Pai et al.	15 Mar 94		
57	5298464	Schlesinger et al.	29 Mar 94		
58	5311059	Banerji et al.	10 May 94		
59	5334804	Love et al.	Aug 1994		
60	5345170	Schwidnt et al.	6 Sep 94		
61	5347711	Wheatcraft et al.	20 Sep 94		
62	5349495	Visel et al.	20 Sep 94		
63	5355283	Marrs et al.	11 Oct 94		
64	5359227	Liang et al.	25 Oct 94		
65	5386341	Olson et al.	31 Jan 95		
66	5389743	Simila et al.	14 Feb 95		
67	5396104	Kimura	7 Mar 95		
68	5463324	Wardwell et al.	11 Oct 95		
69	5476211	Khandros	19 Dec 95		
70	5497456	Kubo et al.	5 Mar 96		
71	5525911	Marumo et al.	5 Jun 96		
72	5535101	Miles et al.	7 Jul 96		
73	5536973	Yamaji	19 Jul 96		
74	5550482	Sano	27 Aug 96		
75	5555422	Nakano	10 Sep 96		

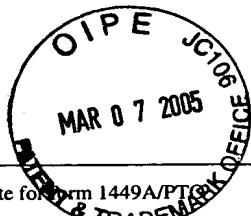


Substitute for Form 149A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				<i>Complete If Known</i>	
				Application Number	09/295,269
				Filing Date	20 April 1999
				First Named Inventor	Khandros et al.
				Group Art Unit	2827
				Examiner Name	Norris, Jeremy C.
Sheet	3	of	4	Attorney Docket No.	P2D7D1-US

	76	5559444	Farnworth	24 Sep 96		
	77	5598627	Saka et al.	4 Feb 97		
	78	5606196	Lee et al.	25 Feb 97		
	79	5621263	Kaida	3 Aug 94		
	80	5621313	Tsuta	15 Apr 97		
	81	5627406	Pace	6 May 97		
	82	5639558	Tatsumi et al.	17 Jun 97		
	83	5656830	Zechman	12 Aug 97		
	84	5672978	Kimura	30 Sep 97		
	85	6482013 B2	Eldridge et al.	19 Nov 02		

FOREIGN PATENT DOCUMENTS								
Examiner Initials [*]	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant	Publication Date	Copy Enclosed	T ⁶
		Office ³	Number ⁴	Kind Code ⁵				
	86	DE	3129568		Beetz et al.	22 Apr 82	Yes	
	87	EP	002166		Hammer et al.	30 May 79	Yes	
	88	EP	396248		Keiichi et al.	7 Nov 90	Yes	
	89	EP	432361		Bartelink	19 Jun 91	Yes	
	90	EP	528367		Mizukoshi	24 Feb 93	Yes	
	91	JP	60-150657		Yoshida et al.	8 Aug 85	Yes	
	92	JP	61-170054		Kameda	31 Jul 86	Yes	X
	93	JP	62-165944		Masuyama	27 Jul 87	Yes	X
	94	JP	63-056924		Miyamoto et al.	11 Mar 88	Yes	X
	95	JP	1-313969		Otsuka et al.	19 Dec 89	Yes	X
	96	JP	3-068163		Otsuka et al.	25 Mar 91	Yes	X
	97	JP	04-240570		Inoeu	27 Aug 92	Yes	X
	98	JP	4-254346		Kunitomo	9 Sep 92	Yes	X
	99	JP	5-129357		Kawaguchi et al.	25 May 93	Yes	X
	100	JP	6-289097		Ohashi	18 Oct 94	Yes	X

OTHER PRIOR ART – NONPATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶	
	101	“Bimetal VLSI Chip Interconnections,” IBM Technical Disclosure Bulletin, vol. 26 no. 11 (April 1987), pp. 5021-22		
	102	“Enhanced Thermosonic Wire Bonding Technique,” Research Disclosure No. 305 (Kenneth Mason Publication Ltd., England September 1989)		
	103	ANDO et al., “Plating Micro Bonding Used For Tape Carrier Package” NIST VSLI Packaging Workshop Yorktown Heights N.Y. one page		



INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				<i>Complete If Known</i>	
				Application Number	09/295,269
				Filing Date	20 April 1999
				First Named Inventor	Khandros et al.
				Group Art Unit	2827
				Examiner Name	Norris, Jeremy C.
Sheet	4	of	4	Attorney Docket No.	P2D7D1-US

	104	MALINAIK, "Bare-Chip-Attachment Method Spreads I/O, Permits Pretesting," Electronic Design, vol. 39 no. 10 (May 23, 1991), pp. 32, 34	
	105	MASTER et al., "Corrosion Protection for Incusil Brazed Joints on Modules" IBM Technical Disclosure Bulletin Vol. 19 No. 6p. 2059	
	106	OHRING, "The Materials Science Of Thin Films" (Academic Press Inc.) pp. 79-83 147-151	
	107	TUMMALA et al., "Microelectronics Packaging Handbook" (Van Nostrand Reinhold New York 1989) p. 802	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.